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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO.   |
|---|-------------|----------------------|---------------------|--------------------|
| 10/017,929  | 10/30/2001  | John W. Linebarger   | 1439                | 1474               |
| 21396   | 7590        | 03/02/2005           | EXAMINER            |                    |
| Sprint<br>6391 SPRINT PARKWAY<br>KSOPHT0101-Z2100<br>OVERLAND PARK, KS 66251-2100 |             |                      |                     | GELIN, JEAN ALLAND |
| ART UNIT  |             | PAPER NUMBER         |                     |                    |
|   |             | 2681                 |                     |                    |

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                          |                     |
|------------------------------|--------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b>   | <b>Applicant(s)</b> |
|                              | 10/017,929               | LINEBARGER ET AL.   |
|                              | Examiner<br>Jean A Gelin | Art Unit<br>2681    |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 October 2001.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 27-46 and 78-93 is/are allowed.
- 6) Claim(s) 1-12, 17-19, 22, 47, 49, 51, 55-64, 66, 68-70, 73, 94, 96, 98 is/are rejected.
- 7) Claim(s) 13-16, 20, 21, 23-26, 48, 50, 52-54, 65, 67, 71, 72, 74-77, 95, 97 and 99-101 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 October 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

### ***Claim Objections***

1. Claims 2, 56, 66, and 87 are objected to because of the following informalities:  
“MMDS” should be --multichannel multipoint distribution service--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-12, 17-19, 22, 47, 51, 55-64, 68-70, 73, 94, and 98 are rejected under 35 U.S.C. 102(e) as being anticipated by Gutierrez (US 6,285,669).

Regarding claims 1, 55, Gutierrez teaches a system for generating wireless complementary signal comprising: an incumbent system configured to format a first signal according to an incumbent protocol (i.e., underlay system col. 3, 65-67, col. 7, lines 40-59); an overlay system configured to format a second signal according to an overlay protocol (col. 3, line 62 to col. 4, line 3, col. 7, lines 40-59); and a controller configured to overlay the first signal with the second signal to create the wireless complementary signal and to transmit the wireless complementary signal (i.e., underlay

and overlay transmission are combined to produce a composite signal and transmit the composite signal via the antenna, col. 7, lines 60-67).

Regarding claim 3, Gutierrez teaches wherein the incumbent system comprises a modulator configured to modulate the first signal according to a protocol used for a narrowband signal (underlay bandwidth is three time less than overlay bandwidth, col. 7, lines 1-8, lines 60-65).

Regarding claims 4, 57, and 68, Gutierrez teaches wherein the overlay system is configured to format the second signal as a CDMA signal (col. 7, lines 45-59).

Regarding claim 5, Gutierrez teaches wherein the overlay system comprises a modulator configured to modulate the second signal according to a protocol used for a broadband signal (col. 7, lines 1-8, lines 60-65).

Regarding claims 6, 58, Gutierrez teaches a network device configured to transmit the first signal to the incumbent system (col. 7, lines 40-59).

Regarding claims 7, 59, Gutierrez teaches wherein the incumbent system is configured to process the first signal using at least one member of a coding, and decoding (col. 13, lines 1-67).

Regarding claims 8, 60, Gutierrez teaches further comprising a network device configured to transmit the second signal to the overlay system (col. 7, lines 40-59).

Regarding claims 9, 61, Gutierrez teaches wherein the overlay system is configured to process the second signal using at least one member of a group comprising coding, and decoding (col. 7, lines 1-67).

Regarding claims 10, 62, Gutierrez teaches wherein the controller is configured to transmit a control signal to the incumbent system and, in response thereto, the incumbent system is configured to set a transmission level for the first signal (col. 16, lines 17-67).

Regarding claims 11, 63, Gutierrez teaches wherein the controller is configured to transmit a control signal to the overlay system and, in response thereto, the overlay system is configured to set a transmission level for the second signal (col. 14, line 32 to col. 15, line 65).

Regarding claims 12, 64, Gutierrez teaches wherein (in fig. 2A): the controller (within the BSC I/F) complement configured to receive an incoming wireless signal (data received by BSC I/F in fig. 2A) and to transmit the incoming wireless complementary signal to the incumbent system and to the overlay system (col. 7, lines 40-67), the wireless complementary signal comprising an incumbent signal portion and an overlay signal portion (col. 7, lines 40-67); the incumbent system is configured to demodulate the incumbent signal portion (col. 5, line 51 to col. 6, line 37); and the overlay system is configured to demodulate the overlay signal portion (col. 5, line 51 to col. 6, line 37).

Regarding claim 17, Gutierrez teaches wherein the controller is configured to process the incoming wireless complementary signal using at least one coding, and Decoding (col. 13, lines 1-67).

Regarding claims 18, 19, 69, and 70, Gutierrez teaches dynamically determine at least one complementary transmission level for at least one member of a group consisting of the first signal and the second signal (col. 11, line 38 to col. 12, line 65).

Regarding claims 22, 73, Gutierrez teaches a carrier sensing system configured to dynamically allocate at least one complementary transmission level for the first signal and the second signal (col. 11, line 38 to col. 12, line 65).

Regarding claims 47, 94, Gutierrez teaches a system for receiving a wireless complementary signal (in fig. 2A) comprising: a controller configured to receive the wireless complementary signal and to transmit the wireless complementary signal, the wireless complementary signal comprising an incumbent signal portion and an overlay signal portion (col. 7, lines 40-67); an underlay system configured to receive the wireless complementary signal from the controller and to demodulate the incumbent signal portion (col. 5, line 51 to col. 6, line 37); and an overlay system configured to receive the wireless complementary signal from the controller and to demodulate the overlay signal portion (col. 5, line 51 to col. 6, line 37).

Regarding claims 51, 98, Gutierrez teaches wherein the overlay system comprises a modulator configured to demodulate the incumbent signal portion according to a protocol used for a CDMA system (col. 7, lines 45-59).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 49, 56, 66, and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gutierrez (US 6,285,69).

Regarding claims 2, 49, 56, 66, and 96, Gutierrez discloses the claimed invention except wherein the incumbent system is configured to format the first signal according to a protocol used for an MMDS system.

Given that protocols change over time, it is inappropriate to have the scope of a claim change with time. Protocols are strict procedures required to initiate and maintain communication. Since organizations implementing protocols meet regularly and have the authority to modify protocols, any connection a claim may have to these standards may vary the scope over time. It would have been an obvious matter of design choice to use the protocol available, at the time the invention was made, to perform the function of the claimed invention.

#### ***Allowable Subject Matter***

6. Claims 27-46, and 78-93 are allowed.
7. Claims 13-16, 20, 21, 23-26, 48, 50, 52-54, 65, 67, 71, 72, 74-77, 95, 97, and 99-101 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Koohgoli et al. US 5,497,505 05/05/1996

Kumaran et al. US 6,405,046 06/11/2002

Aalto et al. US 6,091,955 07/08/2000

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A Gelin whose telephone number is (703) 305-4847. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (703) 306-0003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**JEAN GELIN  
PRIMARY EXAMINER**

JGelin  
February 26, 2005

*jean Almond Gelin 2/26/05*